Serial No.: 10/049,615

Attorney Docket No.: 011362

## AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows:

Amend the FOUR paragraphs from page 1, line 6 to page 2, line 16 to read as

follows (including change of the section titles):

## **BACKGROUND ART**

Zinc oxide is a material having electrically semiconductive, photoconductive and piezoelectric properties. There has been known a method for producing through a spattering or CVD process a zinc oxide material having suitable transparency and crystal-axis orientation for use as materials of piezoelectric or optoelectronics components (Japanese Patent Laid-Open Publication No. Hei 05-254991). A method has also been known for producing a transparent zinc oxide material having an electrically conductive or insulative property by doping zinc oxide of material with a doping material (Japanese Patent Laid-Open Publication No. Hei 05-070286). Further, a hydrothermal process has been known as a method for producing a piezoelectric semiconductor composed of a single crystal including zinc oxide as a primary component (Japanese Patent Laid-Open Publications No. Hei 06-279192, 06-279193, etc.). However, for such zinc oxide materials, it has not been reported to achieve a ferromagnetic state therein successfully.

## **DISCLOSURE OF INVENTION**

## Problems Solved By The Invention

Achieving a single-crystal ZnO thin film doped with Mn having a high ferromagnetictransition temperature enables would enable providing optical isolators or high-density magnetic EN JUTHE BU